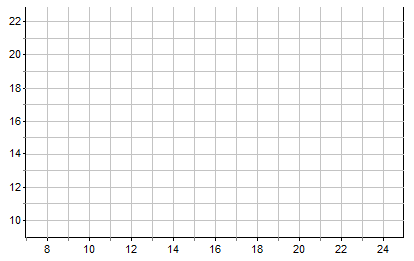
Stat and Data Analysis Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CW 4.2 – LSRL Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BLK: \_\_\_\_

A study was conducted on a species of sharks. Scientists captured and measured 31 sharks and recorded their data. The length of the sharks were measured in feet and found in the list SHLNG. Also the width of their jaws were measured in inches and found in the list SHJW. Since it easier to measure the length of shark from distance and not its jaw width, scientist wanted to build a model that will predict the shark’s jaw width from its length.

1. Create a scatterplot of the data below. (3) 2. Describe the scatterplot(5)



1. Find the LSRL. Write it below. Add the line to your scatterplot.(3)
2. What is the correlation? What is does it tell you?(3)
3. Interpret the slope in the context of the problem.(3)
4. Interpret the y-intercept in the context of the problem.(2)
5. What does the model predict the jaw width would be on a shark that is 14 feet long?(3)
6. What is the residual for a shark that is 14.9 feet long?(4)
7. What is R2? Interpret this in the context of the problem.(3)
8. What does R2 tell you about the confidence you have in your prediction from #7?(2)
9. What percent of the change in jaw width is ***not*** explained by the model (LSR line)?(2)
10. What does the model predict the jaw width would be for a shark that is 28.9 feet long? How confident are you in this prediction?(4)
11. Create the residual plot and sketch it below.(3)
12. Do you think the linear model is appropriate? Why?(2)
13. The residual for a shark not from the study with length 18.7 feet is -1.76 inches. What was the actual jaw width of the shark?(4)